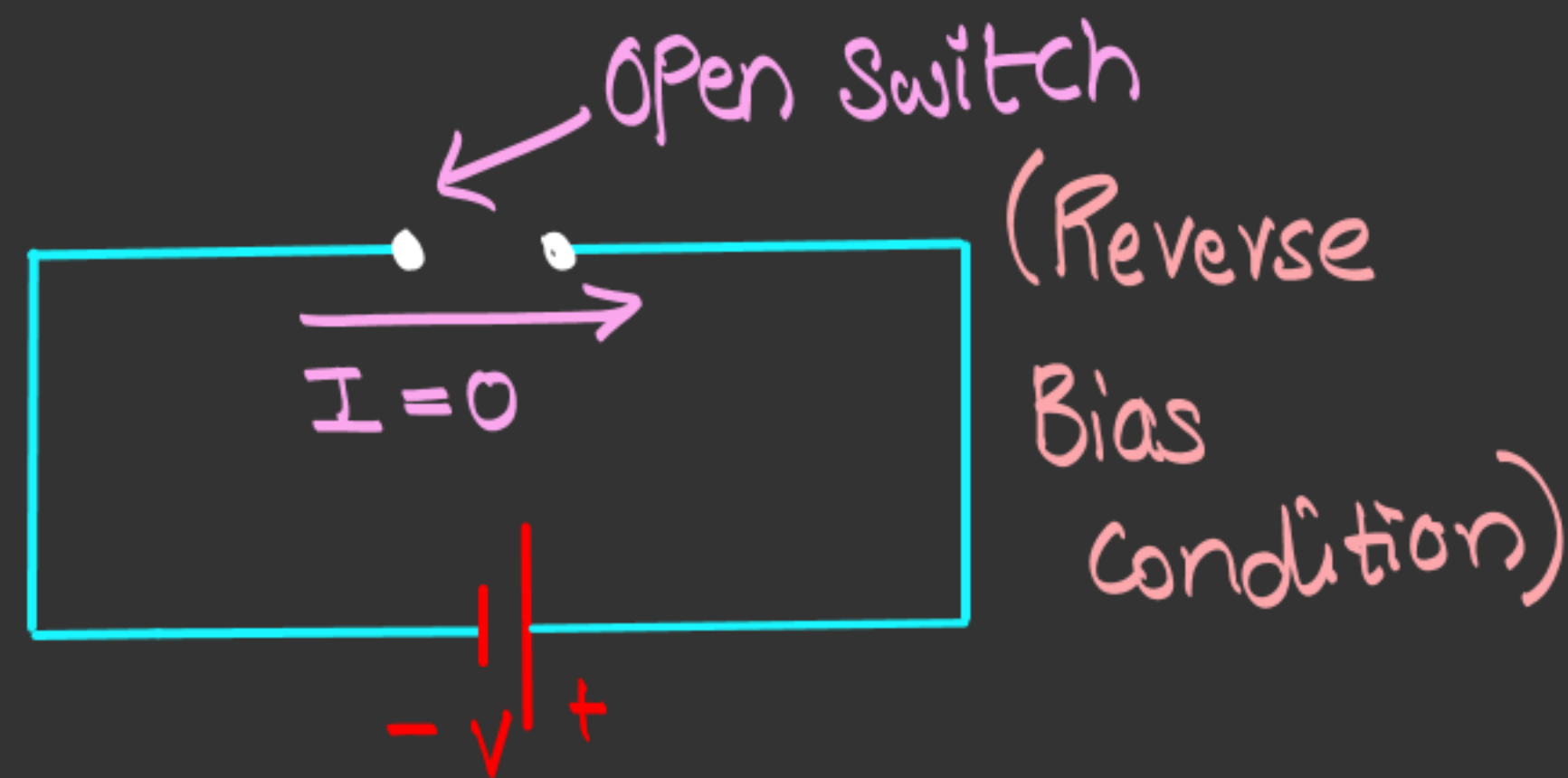
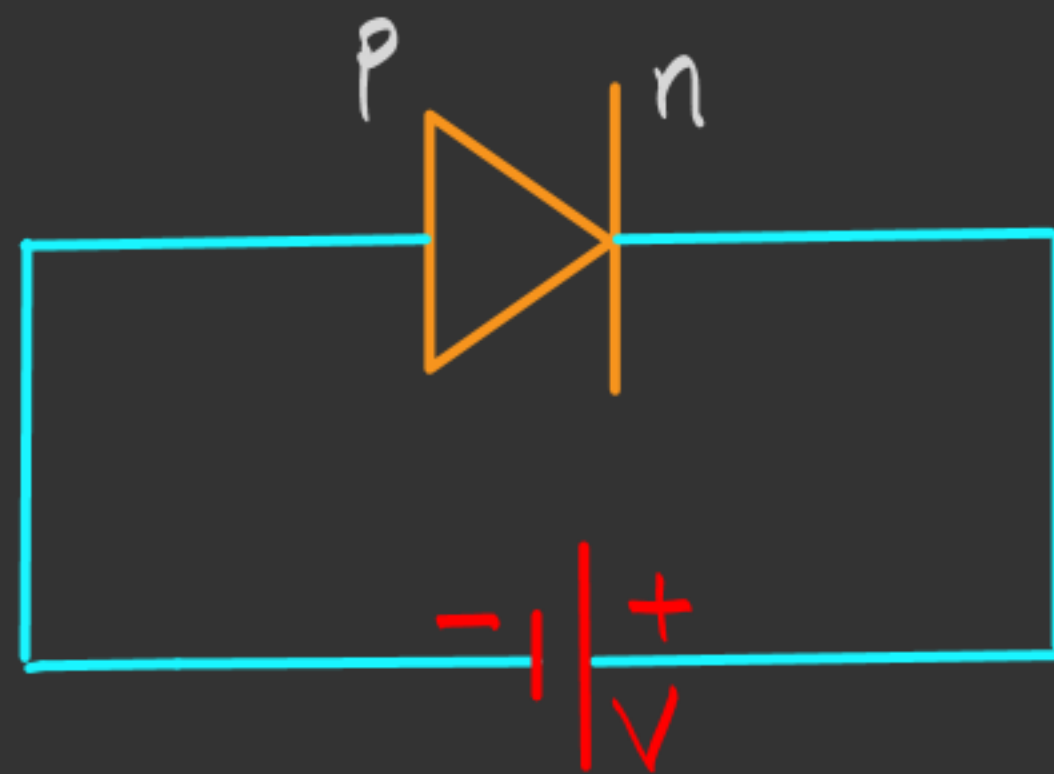
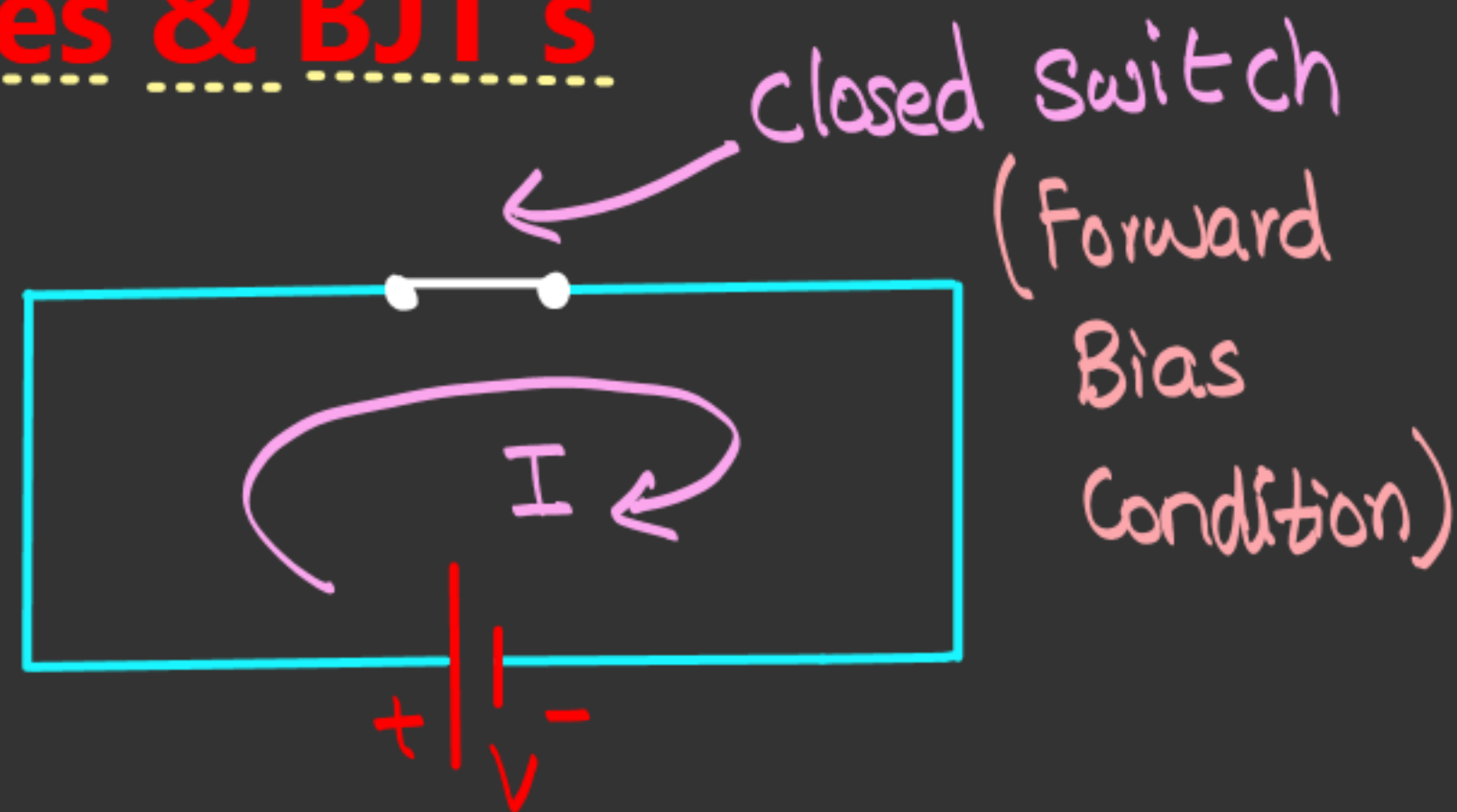
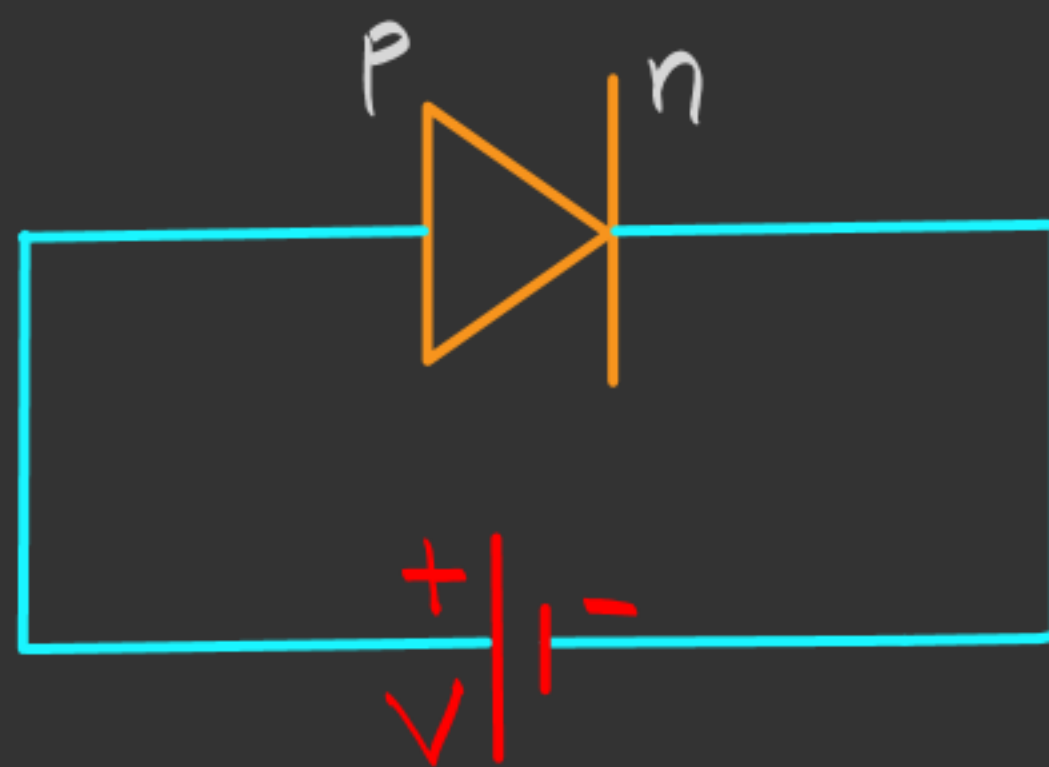
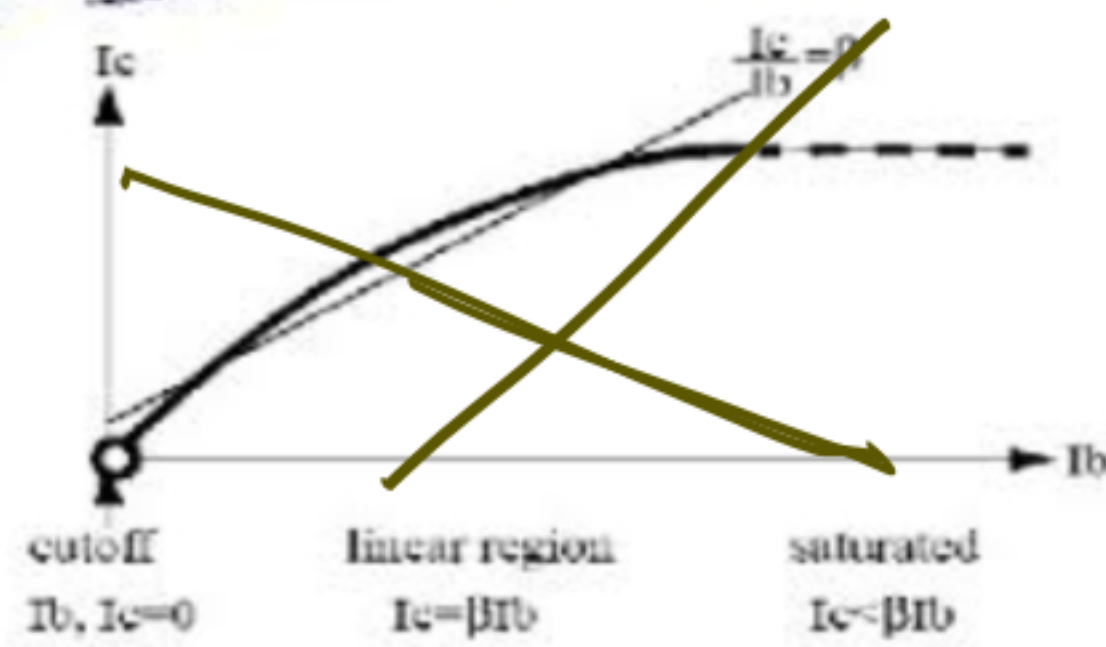


(ideal components)

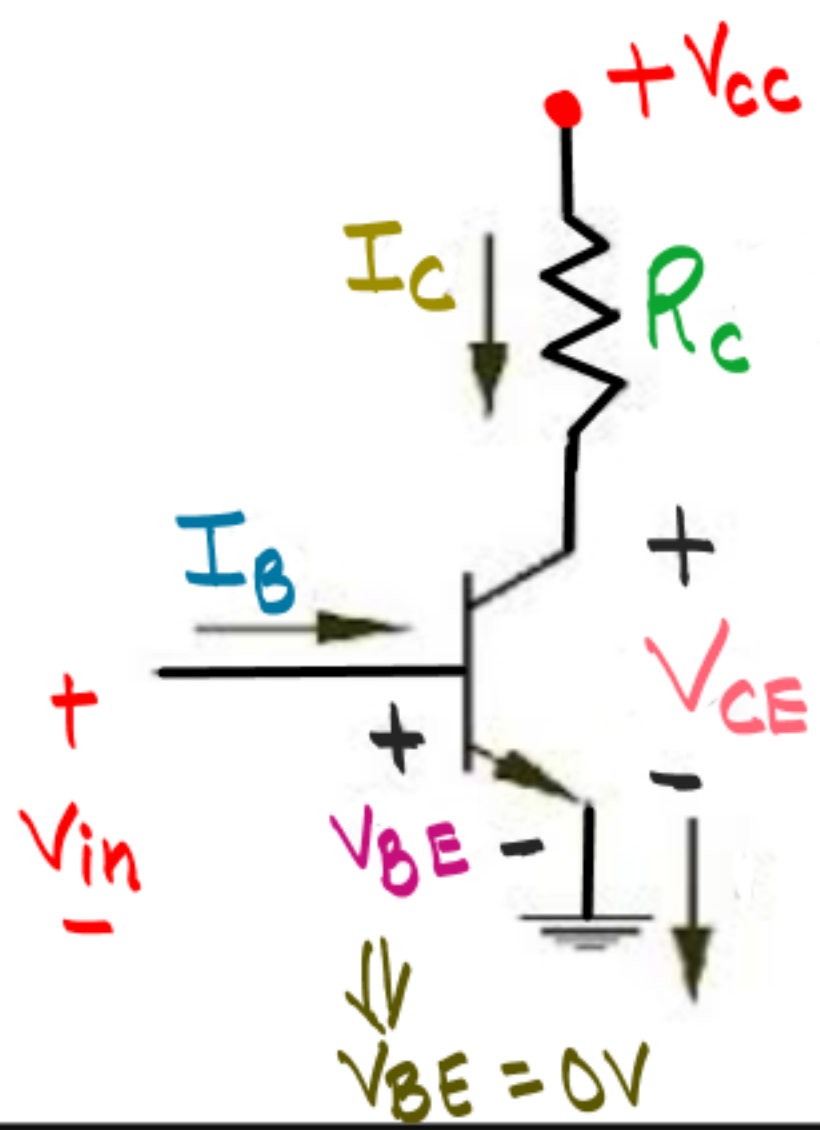
Understanding Diodes & BJT's





BJT operating regions

For digital electronics we always prefer CE configuration.



Operating Region	Parameters	Mode
Cut Off	$V_{in} = 0V$ $V_{CE} = V_{CC}$ $I_B = I_C = 0$	Switch OFF
Linear	 $V_{BE} = V_{in}$ $V_{sat} < V_{CE} < V_{supply}$ $I_C = \beta * I_B$ 	Amplification
Saturated	$V_{in} > 0V$ $V_{CE} = 0$ $I_B = I_C \Rightarrow \text{max}$	Switch ON

